



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/553,108 | 04/20/2000 | Edward S. Ellis | GJH-0017 | 18 4526 |

27810 7590 08/14/2003

EXXONMOBIL RESEARCH AND ENGINEERING COMPANY
P.O. BOX 900
1545 ROUTE 22 EAST
ANNANDALE, NJ 08801-0900

EXAMINER

JOHNSON, JERRY D

ART UNIT PAPER NUMBER

1764

DATE MAILED: 08/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/553,108

Applicant(s)

ELLIS ET AL.

Examiner

Jerry D. Johnson

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: |

Art Unit: 1764

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 6-9, 14-21, 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Angevine et al.

Angevine et al., U.S. Patent 6,150,575, teach diesel fuels which have good ignition qualities, good combustion emission performance and good low temperature characteristics are characterized by a cetane number of at least 45, a total aromatics content of 10 to 15 wt.%, a polynuclear aromatics content of less than 11 wt.% and a sulfur content of not more than 50 ppm (abstract). Table 3, columns 4 and 5 of Angevine et al., disclose preferred compositional parameters for the diesel fuel. In Table 4, Example 1, a diesel fuel having 14.0 wt.% total aromatics, 0.6 wt.% polynuclear aromatics, 13 ppm sulfur, IBP 183°C, T10 point 225°C and FBP 360°C is disclosed. Angevine et al. is relied on as cited above, but differ from the instant claims in teaching a maximum total aromatic content of 15 wt.% as opposed to the instantly claimed composition having a minimum total aromatics content of "about 20 wt.%".

Applicants' claims are directed to compositions comprising "about 20 wt.% aromatics", i.e., the claims include compositions wherein total aromatics are less than 20 wt.%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to increase the amount of aromatics in the diesel fuel taught by Angevine et al. to a maximum amount of "about 20 wt.%" based on the reasonable expectation that such a diesel fuel would

Art Unit: 1764

have similar properties, i.e., good ignition qualities, good combustion emission performance and good low temperature characteristics.

Claims 1-3, 6-9 and 14-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry et al.

Barry et al., U.S. Patent 5,976,201, teach a diesel fuels comprising a straight run distillate fuel having an end point not greater than 300°C, a cetane number in the range of 55 to 60, a specific gravity not greater than 0.83, a sulfur content not greater than 0.1 wt % and an aromatics content of 18 to 25% (column 2, lines 1-9). The distillation of the fuel is controlled so as to limit the density of the fuel since high densities have been found to contribute significantly to the emission of particulates (column 2, lines 33-35). The final boiling point of the fuels is therefore held below about 315° C and preferably below 300° C. Provided that this limitation is observed, bicyclic and polycyclic aromatics will be substantially excluded (column 2, lines 42-46). The initial boiling points of the fuels is lower than conventional, typically in the range of 170° to 190° C. Ten percent points are typically in the range from about 200° to 220° C (column 2, lines 49-53). The addition of conventional diesel fuel additives are taught in column 3, lines 30+. In Table 1, column 4 of Barry et al, a diesel fuel having 0.01 wt% sulfur and 24 wt% aromatics is disclosed. Column 6, lines 20-21, of Barry et al. are directed to diesel fuels having a maximum sulfur content of 0.005 to 0.05 wt.%. While Barry et al. differ from the instant claims in not disclosing a specific fuel having the claimed combination of properties, it would have been obvious to one having ordinary skill in the art at the time the invention was made to follow the above cited teachings to arrive at the instantly claimed composition.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

Art Unit: 1764

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5, 10-13 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 5 and 10-13 improperly depend from canceled claim 4.

Claim 30 is directed to a distillate fuel composition having a total aromatic content of "about 25 to 35 wt.%, a polynuclear aromatic content of less than about 1 wt.%, wherein the ratio of total aromatics to polynuclear aromatics ranges from about 15 to about 25". It is unclear how the claimed composition could contain, for example, 35 wt.% total aromatics, less than about 1 wt.% polynuclear aromatics and also have a ratio of total aromatics to polynuclear aromatics from about 15 to about 25.

Applicant's arguments filed March 12, 2003 have been fully considered but they are not persuasive.

Applicants argue

Angevine does not teach nor suggest that one should have a Total Aromatics content within the presently claimed range of 30-25 wt.% Instead Angevine teaches that narrower ranges within the 10-15 wt.% Total Aromatics range would be beneficial. There is no disclosure that one should increase the range of Total Aromatics beyond 15 wt.%. (Remarks, page 11).

Applicants' argument lacks merit.

Applicants' claims are directed to compositions comprising "about 20 wt.% aromatics", i.e., the claims include compositions wherein total aromatics are less than 20 wt.%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to increase the amount of aromatics in the diesel fuel taught by Angevine et al. to a maximum

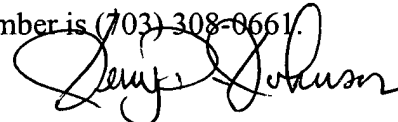
Art Unit: 1764

amount of "about 20 wt.%" based on the reasonable expectation that such a diesel fuel would have similar properties, i.e., good ignition qualities, good combustion emission performance and good low temperature characteristics.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry D. Johnson whose telephone number is (703) 308-2515. The examiner can normally be reached on 6:00-3:30, M-F, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glen Caldarola can be reached on (703) 308-6824. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5408 for regular communications and (703) 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Jerry D. Johnson
Primary Examiner
Art Unit 1764

JDJ
August 12, 2003